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10/501,881

07/20/2004

Jeffrey Kane

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EXAMINER

EPPERSON, JON D

ART UNIT

PAPER NUMBER

1639

MAIL DATE

DELIVERY MODE

07/27/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/501,881

Applicant(s)

KANE, JEFFREY

Examiner

Jon D. Epperson

Art Unit

1639

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 8,10,14-17 and 21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7,9,11-13 and 18-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date see attached.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Applicants response May 17, 2007 is acknowledged

#### *Status of the Claims*

2. Claims 1-21 were pending.
3. Applicant's response to the Restriction and/or Election of Species requirements is acknowledged (Applicant elected without traverse Group I, claims 1-13 and 18-21) and claims 14-17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions, there being no allowable generic or linking claim (see below i.e.,

#### *Response to Restriction and/or Election of Species*).

4. Please note: Applicant's elected species (polymeric membrane = sulfones; support = polyolefin) was found in the art. See MPEP § 803.02.

5. Claims 8, 10, and 21 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected species (see below i.e., *Response to Restriction and/or Election of Species*).

6. Therefore, claims 1-7, 9, 11-13, and 18-20 are examined on the merits in this action.

#### *Response to Restriction and/or Election of Species*

7. Applicant's election of Group I (claims 1-13 and 18-21) **with traverse** is acknowledged.

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8. The traversal found to non-persuasive and is addressed below:

Applicants argue, “Jao et al. merely refers to a “matrix material,” nylon, and there is no teaching of a microporous membrane ... [s]ince all of the pending claims are unified by [this] special technical feature, the application does, in fact, have unity of invention” (e.g., see 5/17/07 Response, paragraphs 2 and 3).

The Examiner respectfully disagrees. Jao et al. inherently teaches a microporous nylon membrane as set forth in the 35 U.S.C. § 102(b)/103(a) rejection below.

9. Applicant’s election of species with traverse is also acknowledged.

10. The traversal found to non-persuasive and is addressed below:

Applicants argue, “some of the alleged species ‘can’ be classified in various classes ... However, the Office has admitted that the alleged species of membranes are classified in the same class (of synthetic resins), and merely differ with respect to the cross-reference art collection subclasses ... it is not clear why, for example, polyolefins would be classified in class 585, rather than in a class of synthetic resins .. [therefore] the election of species requirement is improper” (e.g., see 5/17/07 Response, paragraph 4).

The species would have to be searched to their fullest extent. Thus, any classes that differ would have to be searched regardless of whether some of the classes might overlap or not. In addition, this is not U.S. restriction practice but, rather, lack of unity and, as a result, different classes and subclasses do not have to be shown. Therefore, Applicants’ arguments are moot

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since a lack of unity with regard to the species was shown in the 4/20/07 Restriction requirement in accordance with PCT Rule 13.2 (e.g., see 4/20/07 Restriction, especially paragraphs 15 and 16).

11. As a result, the restriction requirement and/or election of species is still deemed proper and is therefore made FINAL.

***Information Disclosure Statement***

12. The references listed on applicant's PTO-1449 form have been considered by the Examiner. A copy of the form is attached to this Office Action (e.g., 7/20/04 & 4/13/05).

***Specification***

13. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claims Rejections – 35 U.S.C. 102/103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the

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English language

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

15. Claims 1-6, 11, 13, 18, and 19 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Jao et al. (Jao et al. "Interphase bond strength and energy absorption of injection-molded rubber-coated glass/nylon composites" *Journal of Reinforced Plastics and Composites* **1992**, *11*, 811-825) as evidenced by Applicants' specification (e.g., see original claim 10; see also paragraph 47).

For *claims 1 and 13*, Jao et al. disclose an analysis device comprising a microporous polymeric membrane integrally bonded to a non-porous injection molded polymeric support (e.g., see abstract wherein an injection molded glass/rubber/nylon support is disclosed; see also page 820, last paragraph; see also figures; see also page

821, introduction). Jao et al. do not explicitly state that the nylon employed therein is a “microporous” polymeric membrane but the examiner contends that this would be an inherent property of the material as exemplified by Applicants’ specification disclosing nylon to be a “preferred” microporous membrane (e.g., see application, claim 10; see also paragraph 47). “When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.” *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). The Office does not have the facilities to make such a comparison and the burden is on the applicants to establish the difference. See *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and *Ex parte Gray*, 10 USPQ 2d 1922 1923 (PTO Bd. Pat. App. & Int.).

When the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention, “[T]he PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his [or her] claimed product. Whether the rejection is based on inherency’ under 35 U.S.C. 102, on prima facie obviousness’ under 35 U.S.C. 103, jointly or alternatively, the burden of proof is the same...[footnote omitted].” The burden of proof is similar to that required with respect to product-by-process claims. *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980) (a case indicating that the burden of proof can be shifted to the applicant to show that the subject matter of the prior art does not possess the characteristic relied on whether the rejection is based on inherency under 35 U.S.C. § 102 or obviousness under 35 U.S.C. § 103). See

MPEP §§ 2112- 2112.02.

For *claim 2*, Jao et al. disclose the analysis device of claim 1 wherein the support includes a raised portion and the membrane is integrally bonded to the raised portion (e.g., see figures, especially figure 10 showing various raised portions).

For *claim 3-5*, Jao et al. disclose the analysis device according to claim 1 wherein the membrane has a first and second surface and a bulk disposed between the first and second surface the bulk having a thickness and wherein the bulk thickness is reduced by the heat and pressure of injection molding when the polymeric support is formed (e.g., see figure 10 showing first and second surface, one facing upward and one facing downward). The limitation “reduced by the heat and pressure of injection molding” has not been afforded any patentable weight because the net thickness would depend on the starting thickness, which has not been specified. When the reference teaches a product that appears to be the same as, or an obvious variant of, the product set forth in a product-by-process claim although produced by a different process. See *In re Marosi*, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983) and *In re Thorpe*, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). See also MPEP § 2113. The same holds true for claim 4 wherein the bulk thickness of the membrane is claimed to be reduced by at least about ten percent when compared to the bulk thickness of the membrane before bonding it to the support. The same also holds true for claim 5 wherein a membrane having a pore structure reduced by at least about ten percent when compared to the pore structure of the membrane before bonding it to the support is claimed. The same holds true for claim 6 wherein a membrane having an average pore size reduced by at least about ten percent



when compared to the average pore size of the membrane before bonding it to the support is claimed.

For *claim 11*, Jao et al. disclose the analysis device of claim 1 wherein the membrane comprises a composite including 2 layers (e.g., see page 820, last paragraph wherein a glass/rubber/nylon composite is disclosed).

For *claims 18 and 19*, Jao et al. disclose the analysis device according to claim 2 wherein the membrane has a first and second surface and a bulk disposed between the first and second surface the bulk having a thickness and wherein the bulk thickness is reduced by the heat and pressure of injection molding when the polymeric support is formed (e.g., see figures, wherein rubber has a top layer surface facing nylon and a bottom surface facing the glass). Jao et al. do not state that the process of applying heat/pressure in the injection molding process reduces the thickness of the bulk layer but the Examiner contends that this would be an inherent property since the same materials are being used under the same injection molding conditions. "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). The Office does not have the facilities to make such a comparison and the burden is on the applicants to establish the difference. See *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and *Ex parte Gray*, 10 USPQ 2d 1922 1923 (PTO Bd. Pat. App. & Int.).

Alternatively, the Examiner contends that this process limitation does not constitute a patentable limitation since the final thickness would depend on the initial

thickness, which was not specified. Therefore, the claim still reads on any thickness.

When the reference teaches a product that appears to be the same as, or an obvious variant of, the product set forth in a product-by-process claim although produced by a different process. See *In re Marosi*, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983) and *In re Thorpe*, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). See also MPEP § 2113. The same holds true for the process limitation in claim wherein the bulk thickness of the membrane is reduced by at least about ten percent when compared to the bulk thickness of the membrane before bonding it to the support (i.e., the thickness of the membrane before bonding it to the support is not specified in the claim).

16. Claims 1-7, 9, 11-13, and 18-20 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Proulx et al. (U.S. Patent Application No. 2003/0000874 A1) (earliest U.S. Priority is **June 29, 2001**).

For *claims 1 and 13*, Proulx et al. disclose an analysis device comprising a microporous polymeric membrane integrally bonded to a non-porous injection molded polymeric support (e.g., see figure 2 showing microporous membrane bonded to polymeric support; see also page 3, paragraphs 38 and 39 disclosing various suitable microporous membranes including polyethersulfone; see also page 2, paragraph 30 disclosing various support (strip) materials; see also paragraph 15 disclosing that said strip is non-porous).

The product of Proulx et al. meet all of the structural limitations of the claimed product (see above) except for the product-by-process limitations (i.e., the process of

injection molding) and thus would either anticipate or render obvious the claimed device. See MPEP § 2113, “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.’ *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).” Here, Applicants’ claims are drawn to a device (i.e., a product), but are defined by various method steps (i.e., injection molding) that produce said device and, as a result, represent product-by-process claims. Thus, the process limitations do not appear to provide any patentable weight to the claimed invention in accordance with MPEP § 2113. One of ordinary skill would expect the product to be the same no matter how it was synthesized and/or prepared. Here, Proulx et al. provide strong bonding between the layers using heat/pressure just like the heat/pressure used in injection molding (e.g., see page 2, paragraphs 24 and 25; see also page 3, paragraph 34).

For **claim 2**, Proulx et al. disclose the analysis device of claim 1 wherein the support includes a raised portion and the membrane is integrally bonded to the raised portion (e.g., see figure 5, element 25 showing raised portions relative to the base of element 25 in a “step” fashion).

For **claim 3-6, 18, and 19**, Proulx et al. disclose the analysis device according to claim 1 wherein the membrane has a first and second surface and a bulk disposed between the first and second surface the bulk having a thickness and wherein the bulk

thickness is reduced by the heat and pressure of injection molding when the polymeric support is formed (e.g., see figure 2 showing “thickness” between the top and bottom of the element; see also figure 5). The limitation “having a thickness and wherein the bulk thickness is reduced by the heat and pressure of injection molding when the polymeric support is formed” has not been afforded any patentable weight because the net thickness would depend on the starting thickness, which has not been specified. When the reference teaches a product that appears to be the same as, or an obvious variant of, the product set forth in a product-by-process claim although produced by a different process. See *In re Marosi*, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983) and *In re Thorpe*, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). See also MPEP § 2113. The same holds true for claim 4-6, 18, and 19 wherein the starting thickness or pore size is not provided.

For **claim 7 and 20**, Proulx et al. disclose the analysis device of claim 1 wherein the membrane comprises a sulfone membrane (e.g., see page 3, paragraph 49 wherein polysulphone is disclosed including polyethersulphone).

For **claim 9**, Proulx et al. disclose the analysis device of claim 7 wherein the membrane is a polyethersulfone membrane (e.g., see page 3, paragraph 49).

For **claim 11**, Proulx et al. disclose the analysis device of claim 1 wherein the membrane comprises a composite including 2 layers (e.g., see figures 2 and 5).

For **claim 12**, Proulx et al. disclose the analysis device of claim 1 wherein the support comprises a polymer selected from the group consisting of polystyrene, polyolefin, polycarbonate, polyvinyl chloride, polyurethane and acrylic (e.g., see page 2, paragraph 3 disclosing acrylics; see also claim 4 wherein various strip materials are

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disclosed including polyolefins).

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jon D Epperson whose telephone number is (571) 272-0808. The examiner can normally be reached Monday-Friday from 9:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James (Doug) Schultz can be reached on (571) 272-0763. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jon D. Epperson, Ph.D.

July 20, 2007

JON EPPERSON  
PRIMARY EXAMINER

